

A SELF-COMPENSATING MARK DESIGN FOR STEPPER ALIGNMENT

ABSTRACT OF THE INVENTION

5 A system and method for fabricating integrated circuits using four fine alignment targets per stepper shot. The four alignment targets are disposed within the scribe line on each side of a four-sided stepper shot. The targets on opposites sides of the region are located in mirror-image positions. For example, in a square or rectangular region, the targets could be at the mid-point of each side, or at each corner. Because the scribe lines for adjoining stepper
10 shots overlap, a target in one shot will overlay a target from a preceding shot. In a positive resist process, for example, the target resulting from the overlay will be reduced in size by an amount corresponding to the amount of rotational error, if any. However, the target will still indicate the center of the stepper shot, thereby compensating for the rotational error with no further measurements.

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